

Renal Association Medical Elective Report

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During the summer of 2015, I was fortunate enough to undertake my 8 week medical elective in Tonga. The Kingdom of Tonga is a beautiful collection of islands set in the south Pacific Ocean. I spent 4 weeks in Vaiola Hospital on the main island of Tongatapu and then a further 4 weeks in Prince Wellington Ngu Hospital on the island of Vava'u.

With its beautiful landscape, warm climate and infectiously friendly people, Tonga truly is a remarkable place to be. However, it is currently facing an ever growing obesity epidemic. With an average Body Mass Index (BMI) of 31.9, Tonga ranks as fourth largest on the World Health Organisation's list of BMI trends worldwide.¹ Obesity is a major risk factor in the progression of both hypertension and type 2 diabetes. Both of these conditions are major risk factors for CKD.²

Learning objectives:

- To understand the challenges faced by healthcare professionals in Tonga when treating patients with Chronic Kidney Disease (CKD) and compare challenges to those faced by healthcare professionals in Newcastle, UK
- Evaluate the sociocultural factors impacting management of those with CKD

Challenges faced by healthcare professionals

Funding

Prince Wellington Ngu Hospital is a small district general hospital with 40 beds. It serves as the only hospital on Vava'u, and when more comprehensive medical care is required, patients are sent to Vaiola Hospital, on the main island. In Prince Ngu Hospital, I spent my time in the department of Non-Communicable Diseases.

There is a clinic that runs twice a week for people with chronic conditions. The most common condition seen in this clinic is type 2 diabetes, with hypertension often accompanying. Here, each patient is seen during an twice a year to discuss how their condition is progressing. Patients are seen by either a doctor or nurse who accesses the patient for complications of diabetes, which includes testing their renal function. This is similar to Newcastle, although appointments occur more frequently, with patients attending once every three months.

¹ World Health Organisation, *Global Health Observatory Data – Overweight and Obesity* – URL: http://www.who.int/gho/ncd/risk_factors/overweight/en/ [accessed 19/9/2015]

² NHS Choices, Chronic Kidney Disease – URL: <http://www.nhs.uk/conditions/Kidney-disease-chronic/Pages/Introduction.aspx> [accessed 19/9/2015]

The main difference I noticed between Newcastle and Tonga, with regards to renal care was the prognosis for patients who have CKD. In a hospital where there is no department dedicated to renal disease, outcomes for patients with CKD are poor. Dialysis is a viable and life saving option to all patients in Newcastle who fit the criteria for it. Unfortunately, the same can not be said for people with CKD in Tonga. The opening of a dialysis unit is an expense the Tongan government simply cannot afford.³

For those with CKD who do go on to develop end-stage renal failure, their only way of accessing life-saving treatment is to move to New Zealand and fund their own dialysis treatment. With the average GDP per capita in Tonga being \$4,114.1 USD⁴, this is an option only available to a very select few patients. For those who cannot afford to travel to New Zealand, their only option is to receive care in a palliative context.

The management of CKD is focused on maintenance of present renal function and delaying the progression to end-stage renal failure. Similarly to the UK, patient education is of utmost importance when managing people with hypertension and type 2 diabetes in Tonga. In Newcastle, and throughout the UK, DESMOND (Diabetes Education and Self Management for Ongoing and Newly Diagnosed) courses are used as a way of effectively providing patient education to help those with type 2 diabetes better manage their condition. This is not something that is currently available in Tonga.

Tradition, Diet and Health Beliefs

The prevalence of type 2 diabetes could in part be attributed to the Tongan diet. Food plays a very fundamental part in Tongan culture. During my visit there was a sense of great excitement and celebration as there was to be a coronation of a new king. This enabled me to see first-hand the role that food plays in Tonga, especially during times of national celebration.

“Tongan Feasts” play a large and enjoyable part of many celebrations in Tonga. It is not uncommon to have a pig slaughtered and spit-roasted for special occasions. Carbohydrates such as yams, taro and white bread have a place in all three meals of the day. Furthermore, exercise does not feature prominently in Tongan society. Although most local amenities are within walking distance of each other, the preferred mode of transport amongst Tongans appears to be by car. A lack of exercise, coupled with unhealthy eating habits, contribute to obesity and type 2 diabetes being commonplace, and therefore social norms within Tonga.

Vaiola Hospital is a larger district general hospital with around 200 beds. During my time on the general medicine ward, the most common admission was for complications of diabetes. I was able to speak to patients with diabetes about their ideas surrounding diabetic nephropathy. A common theme that reoccurred was that diabetic nephropathy was often

³ Tagata Pasifika, *Dialysis crisis in the Kingdom of Tonga* <https://www.youtube.com/watch?v=tvTIsB4yicI> [accessed 20/9/2015]

⁴ The World Bank, *GDP per capita (current US\$)* <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD> [accessed 20/9/2015]

forgotten about, because its signs and symptoms are insidious. As patients only attended clinics twice a year, they only ever considered renal function being important during those appointments. The risk of amputation due to diabetic foot disease appeared to be the most considered complication. This is a problem faced by healthcare professionals in Newcastle and in Tonga. Doctors have the dilemma of not wanting to scare patients, but also needing their patients to fully understand the importance of good management of their conditions to avoid end stage renal failure.

When speaking specifically to patients with CKD, there did seem to be a good understanding of the importance of maintaining as good a renal function as possible. This particular patient group was very aware of the importance of taking their medication for diabetes and hypertension regularly. The need to reduce salt intake was also well understood, however in general, corned beef remained a staple in most of the patients' diets. The patients with CKD widely attributed their education to the work of the doctors and nurses on the wards and in the outpatient clinics. This would imply that those who already have CKD have good understanding about their condition. Healthcare professionals are faced with difficulty in educating patients about the importance of their renal health before the onset of CKD.

Conclusion

I thoroughly enjoyed my time in Tonga, and the placements were a fantastic opportunity to experience healthcare in another country. Sociocultural factors play a large role in the attitudes towards health and patient centered management. When comparing Tonga and Newcastle, it is clear that funding is pivotal in the provision of healthcare to patients. In Tonga, there is also less access to patient education such as the DESMOND course in the UK; a less comprehensive understanding of the complications of diabetes, such as diabetic nephropathy, can lend itself to a greater risk of developing CKD. There is a commonality in the problem with obesity in both Tonga and Newcastle. This is something that currently is and is likely to continue to be a strain on both healthcare systems in the future.